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Handbook for
WORKERS in
SCHOOL-LUNCH PROGRAMS
with Special Reference to Volunteer Service

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UNITED STATES DEPARTMENT OF AGRICULTURE
Food Distribution Administration
Nutrition and Food Conservation Branch

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HANDBOOK FOR WORKERS IN SCHOOL-LUNCH PROGRAMS

With Special Reference to Volunteer Service

Issued by the Nutrition and Food Conservation Branch,
Food Distribution Administration

CONTENTS

	Page		Page
Introduction.....	1	The jobs to be done—Continued.	
Why a school-lunch program.....	1	Planning the work—Continued.	
The place of the volunteer in the school-lunch program.....	2	An example of planning work.....	14
Working with principal, teachers, and school children.....	2	Getting ready for the next day's lunch....	14
Establishing good work habits.....	3	Food preparation.....	14
Personal hygiene for workers in a lunchroom....	3	How to use a recipe.....	15
Responsibilities for guiding and managing the school-lunch program.....	4	Oven temperatures.....	17
The volunteer.....	4	Serving the school lunch.....	17
The community school-lunch committee.....	4	Preparation for serving.....	17
The school administrator.....	5	Methods of serving.....	18
The supervising teacher or lunchroom manager..	5	Service of foods.....	18
The classroom teacher.....	6	Care and storage of food.....	19
An adequate school lunch.....	6	The care of food.....	19
Good nutrition throughout the child's life....	6	Cleaning the storage space.....	20
Signs of malnutrition.....	7	Dishwashing.....	21
Essential foods for children.....	7	Sanitation and safety.....	22
The jobs to be done.....	9	Housekeeping.....	22
Meal planning.....	9	Cleaning kitchen equipment.....	22
Menu patterns.....	9	Cleaning kitchen and lunchroom.....	23
One-dish meals.....	10	Safety precautions.....	24
Factors determining the type of meal served.....	11	Financing the school lunch.....	25
Pleasing food combinations.....	11	Utilizing available resources.....	25
Purchasing and checking food and supplies....	13	Contributions from individual homes.....	25
Quantities to order.....	13	Keeping records.....	26
Checking food and supplies.....	13	Food records.....	26
Planning the work.....	13	Finance records.....	26
Work plans.....	13	Service records.....	26
		Space and equipment.....	26
		Marketing guide.....	28
		Sources of additional information.....	30

PATRIOTIC WAR WORK is where one finds it. It may be that the job which should be done to help your country lies close at hand. If you are able to cook—to prepare a good meal quickly—if you have a way of getting along with other people—if you have a genuine concern to see that the children of today grow up into strong citizens of tomorrow—then your community may need you in its school-lunch program. Volunteer now.

Volunteers in the school-lunch program should register with the local defense council or at its local volunteer office. They may also offer their services directly to school officials or to the persons appointed to act for them, although registration is preferable.

During wartime there is a greater need than ever for the expansion of feeding programs for school children. With manpower demands critical, the volunteer is called upon to carry much of the responsibility in school-lunch programs. This handbook has been prepared as a guide for all women, particularly the volunteers, working in such programs.

The Nutrition Division of the Office of Defense Health and Welfare Services, now a part of the Nutrition and Food Conservation Branch of the Food Distribution Administration, under the sponsorship of the Cooperating Committee on School Lunches, invited a group to come to Washington to prepare a handbook. Much of the material has been adapted and compiled from available workbooks that have proved useful in various sections of the country.

Those who prepared the material for this handbook have had wide and varied experience in the operation of all types of school-lunch programs. They are the following:

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The Cooperating Committee on School Lunches is made up of representatives of the following agencies:

American Red Cross, Nutrition Division.

Federal Security Agency:

United States Office of Education.

United States Public Health Service.

Social Security Board, Division of Public Assistance.

Federal Works Agency:

Work Projects Administration.

Office of Civilian Defense.

Office of Price Administration:

Consumer Division.

United States Department of Agriculture:

Bureau of Human Nutrition and Home Economics.

Extension Service.

Farm Security Administration.

Food Distribution Administration.

Rural Electrification Administration.

United States Department of Labor:

Children's Bureau.

National Congress of Parents and Teachers

INTRODUCTION

America is at war. Many have gone out to fight, but many are left at home to work. Those who are left at home wish also to do their part. Volunteers are needed in the school-lunch program, for here there is a big job to be done, the doing of which will yield big returns both now and in the years to come.

Because this country is at war the school lunch is more important than ever. Many more mothers are working outside the home and cannot pack a good school lunch or prepare a good noon meal for their children. Point rationing, too, is making more difficult the planning of nutritious meals.

Volunteers in the school-lunch program will be helping to build strong bodies. And when a group of people work together to make the health of children better they work to build a

stronger nation, for no nation is stronger than the people in it.

This Nation needs people with sound bodies and alert minds. Strength and alertness are needed not only to man the guns and the ships and the planes but also to plant the fields, turn the wheels of factories, and do the many other jobs that will support the Nation now and preserve it through the difficult years that will follow the war.

Never before have people been more willing to work together for the common good. They know that if they do not learn to work together in small groups they cannot hope to work together in the large group which makes up the Nation. If they do not work well together in the large group, then democracy will fail—and that the American people are determined shall never happen.

WHY A SCHOOL-LUNCH PROGRAM

School people, parents, and many others in the community know how important a complete school lunch is to the health of children. The right kind of food and enough of it make for stronger, finer bodies.

For all children the school lunch is very important; for many children it is the best meal of the day. The school lunch is as important as lessons in the classroom. For a long time it was thought that the school had only to teach the children the "school subjects." It is now known that the school should think of the whole child. It should do what it can to make all living better for him, in school and out.

The school-lunch program is not just a feeding program. It is part of an over-all program to help children grow better in mind and body and spirit. It is a vital part of school living and from it the children and all who work in it will learn many things.

The children will learn better how to live together, for all will assemble in the lunchroom and

all will have the same choices of food. Every child will have a good lunch, and none will be singled out because he cannot pay.

The children will learn what a good lunch is and how to choose the right kind of lunch. They will come to like many different kinds of foods. By eating together, many food habits will be improved. They will take back to their homes menus that have been made at school, and in this way their parents also will learn.

The children will learn to practice habits of cleanliness, to wash their hands before eating, and to expect clean food from a clean kitchen. The teachers and other school officials, with the help of the volunteers, will see that the children learn and practice good table manners. All working together will help the children to talk

pleasantly at meals and to enjoy a social time with their friends.

In the school-lunch program there will be work for everyone, young and old. All in the school family at some time or other should have the experience of working in the school-lunch program. Working for the common good is a privilege no one should miss.

The children, under the direction of their teachers and working with the volunteers, will be able to give much help. Some will help with the planning, cooking, and serving. Some will help with the dishwashing. Others may mimeograph the menus. Some will be able to help with the record keeping, the marketing, and the buying under point rationing, thereby learning much about the value and management of money. Many will find jobs in the school garden—planting, working and tending, gathering vegetables, storing, drying, and canning. Some will help to make the lunchroom more attractive. Pictures painted by the children may be hung on the walls. Table mats, table decorations, and place cards may be made for visitors to the school.

It is important for all in the community to understand the school-lunch program. Volunteers may help the school officials and teachers in explaining the lunch program to others. The program may be explained by talking with par-

ents and others in the community, by interesting posters displayed at meetings, or by having a luncheon to which parents are invited. Through the interest of the volunteer and through the work that she does many will come to see the real value of the school lunch. When the people in the community understand the program they will be more ready to help with it.

Sometimes the work may not go well. Sometimes it may even seem to fail. The volunteers may wish to give up altogether. Difficulties, however discouraging, can usually be solved by talking things over with those in charge. By working and planning together, new and better ways of doing things will be found.

Even though some of the work is hard, pleasure will be found in doing it. Working with and for children and seeing them grow into better ways of living is a rich reward in itself. There will be opportunity to meet new friends, to know old ones better. The hardships and the joys will be shared with others.

All those who work in the school-lunch program will feel that they are of real service to the community; and the community by the efforts of all working together, will come to understand that the program is a part of a great plan—local, State, and national—to help boys and girls become stronger, finer citizens.

THE PLACE OF THE VOLUNTEER IN THE SCHOOL-LUNCH PROGRAM

Volunteers in the school-lunch program will be able to make many and varied contributions to school living. Many will have had experience in marketing and in planning, cooking, and serving meals. Many will have had much experience in dealing with children. All this knowledge is valuable and there will be places where it is needed.

Working With Principal, Teachers, and School Children

Working in the school will bring the volunteer in close contact with many different individuals and groups. Learning to work well with others may be a job in itself. In order to work well together there must be understanding of the whole.

The volunteer knows that the principal is in charge of the school. She will want always to know, in order to do her own work well, his general plans for the lunch program and how they are to be carried out.

The teachers in the school will have a large part in the lunch program. Volunteers will be able to get much helpful advice from them on better ways of dealing with children in a group.

Children will appreciate going into a quiet, well-ordered lunchroom and sitting down to a good meal. They will appreciate not being hurried while they eat. They are quick to respond to kindness, politeness, and graciousness.

No doubt many children will help with the lunch program. Many of them will be learning new ways of working. They will sometimes make mistakes. They will sometimes be slow in doing things, and sometimes they will be neglectful. Patience and understanding will be needed in working with them. They are just beginning to learn, and they need much help and guidance.

In the school-lunch program, as in all successful businesses, someone will be directly in charge. To that person all workers go for directions. The number of workers needed and the kinds of jobs to be done will be determined by the size of the school and the lunch to be served. In any case, the volunteer will want to know what her particular jobs are to be so that she may plan to carry them out to the best of her ability.

Establishing Good Work Habits

Below are some suggestions which will help the volunteer in doing a good job:

- Report to work promptly.
- Leave wraps, dress, purse, and packages in the designated place.
- Work quietly and efficiently.
- Follow all directions carefully.
- Keep work surfaces and serving table clean and neat at all times.
- Put everything away in its proper place.
- Serve food on time.
- Take a regular time for eating and relaxing.
- Comply with the school regulations about such things as smoking and chewing gum.
- Work out solutions to difficulties in conference with the lunchroom manager or school administrator.

Personal Hygiene for Workers in a Lunchroom

The volunteer knows it is vital that all those working on the school lunch be in good health. For this reason she—

- Understands the importance of a physical examination for food handlers, when it is required.
- Notifies the school but does not report for work when she has a sore throat or cold.

Makes sure she is free from any communicable disease, such as trench mouth or "flu," which may be carried by food, dishes, and silverware.

The school-lunch worker is careful of her appearance. She keeps her person clean and her clothing neat. A washable dress or uniform is the best type of garment for her. It may be a simple house dress, a cover-all apron, a smock, or a uniform designed by the local group especially for the school-lunch worker.

Because she realizes that all persons working with food should take care to keep conditions in the lunchroom sanitary, she—

- Protects food from hair by wearing a hair net, cap, or kerchief that keeps all the hair in place.
- Keeps dish towels and hand towels hung in the proper place (never thrown over the shoulders or carried under the arm).
- Mixes food with the hands only when necessary, as in kneading dough.
- Uses paper towels or individual hand towels for drying her hands (never dish towels).
- Uses individual drinking cups.
- Scalds all utensils which have been dropped on the floor, before using them again.
- Samples food with a "tasting" teaspoon or fork (never the mixing spoon) and washes and scalds it after each use.
- Keeps her fingernails short and clean.
- Covers her mouth or nose with a handkerchief when she coughs or sneezes.
- Uses comb, powder puffs, and fingernail file in the rest room (never in the kitchen or lunchroom).
- Washes her hands with soap and water after returning from the toilet and after touching the hair or face.

She helps to keep things running smoothly by working well with others. Doing the same jobs from day to day will not always be easy, but she will have the satisfaction that comes from a job well done—in knowing that each day hungry children are being fed well and that each day they are learning valuable lessons from informal teaching.

The volunteer will find that much she has learned at school will be of help in her own home, such as meal planning, the value of foods, different ways of preparing foods, better ways of storing supplies, and ways of arranging equipment to make the work easier. As she learns these processes better she will want to learn more and more. Nearly always there will be someone in the community to give her additional help when it is needed.

RESPONSIBILITIES FOR GUIDING AND MANAGING THE SCHOOL-LUNCH PROGRAM

One person alone cannot make the school lunch a success. It takes many people working together to create a good lunch program—school administrators, teachers, local organizations, volunteers, the entire community. Each person has a special kind of help to give. Each should understand the responsibilities of all others in the program. Jointly, they can make the school lunch truly educational.

The Volunteer

The volunteer can aid the school-lunch program in many ways. The kind of assistance given in any one case will depend on the needs of the school and what the volunteer can offer. She should talk with the school administrator and the person in charge of the lunch to plan with them how she can best help. In some small schools the administrator may give to a group of volunteers the responsibility for the whole lunch program. When that happens, one should be chosen as the volunteer in charge, with the others assisting as helpers. More, often, all volunteers will work with the lunchroom manager or supervising teacher, and will be responsible for only a certain part of the work. In many places volunteers and paid helpers will be working side by side.

A volunteer in the school-lunch program becomes a member of the school family. She may contribute as much to the welfare of the child as a classroom teacher. Because she is a part of the school, she has certain obligations to it. She should—

- Report regularly and continuously.
- Notify the school and find a substitute when she cannot go herself.
- Keep the same standards of work as those expected of paid workers.
- Willingly accept supervision and direction from those in charge.
- Talk with the school administrator and the lunchroom manager about the progress of the school-lunch program and offer suggestions for its improvement.
- Talk with the school administrator and the lunchroom manager, not with people outside the school, about problems that arise about which she may be concerned.
- Report any problems concerning pupils to the teacher in charge.

It may help the volunteer to appreciate her contribution if she understands the responsibilities of all the others who are concerned with the program. When she knows what can be expected of the community, the school administrator, the lunchroom manager, and the teachers, she can see her own job more clearly.

The Community School-Lunch Committee

Frequently a community school-lunch committee is set up to guide those who are interested in the school-lunch program. Local organizations, such as the parent teacher association, men's and women's service clubs, fraternal orders, professional clubs, farm organizations—in fact, any civic group that is concerned with the health of the school child—should be represented on the committee. Those persons in the school who have responsibility for the lunch should be on the committee, too.

The community school-lunch committee may include also the school administrator, teachers, school-lunch manager or supervisor, volunteers helping with the lunch, representatives from home demonstration clubs, public health, labor, nutrition council, interested citizens, and pupils, as well as representatives of civic organizations.

In communities having only a few organizations, the committee will necessarily be a small one. The interest—not the size of the group—is the important factor.

In places already having active nutrition or food committees, it may be better to ask such a group to work on the school lunch rather than to organize a new committee. Usually the addition of only a few people will be necessary to include representation from all groups interested in the school-lunch program.

A community school-lunch committee may be formed by the school or by a person or a group in the community. When it is started by some person or group outside the school, the school administrator should be among the first to be invited to become a member.

A community school-lunch committee can assist the lunch program regardless of the location of the school—in a metropolitan, an urban, or a rural area. It acts as an advisory body; it has no power to administer or operate the school lunch. It has regular meetings with work definitely planned, and gives to the school lunch continuous aid and support. Such a committee may assist by—

- Helping to obtain space and equipment needed for preparing and serving the lunch.
- Securing food, money, or equipment.
- Planning ways to produce food for the lunch through a garden program.
- Planning ways of conserving food for the lunch by canning, drying, "krauting," freezing, and storing.
- Finding volunteer workers.
- Arranging for the training of volunteers.
- Keeping the public informed concerning the program through the press, club programs, exhibits, and civic meetings.
- Providing for any special services that members are able to give. For example, members with professional training or experience may be able to offer counsel on the selection and arrangement of equipment; others may be able to give their services in training volunteers.
- Recommending the policy to be followed in regard to whether or not resale goods, such as soft drinks, candy, potato chips, pastries, pretzels, and cakes, will be offered for sale to school children.

The School Administrator

The school administrator is responsible for everything in his school; therefore, he is chiefly responsible for all phases of the school lunch. Sometimes he directs the program personally; more often he asks one of the teachers, a paid lunchroom manager, or a volunteer to do it for him.

The school administrator is responsible for—

- Fitting the lunch into the total school program.
- Setting up a budget and keeping accounts.
- Providing space for preparation, serving, and storage.
- Providing equipment.
- Making arrangements for obtaining food.

Making sure that all pupils have an adequate lunch.
Arranging the schedule so that there is time for toileting and hand washing before lunch, and for pupils to eat the meal comfortably.

Arranging the kind of schedule that will allow time for all teachers to share in the school-lunch program.

Arranging the schedule so that the lunch becomes a part of the regular program of the teacher in charge, and not an extra burden.

Providing safe and sanitary conditions for pupils and workers by—

Informing workers of Federal and State laws and local ordinances dealing with food service and making sure that all regulations are observed.

Making certain that all food is safe and clean.
Having the water supply tested by the health department.

Complying with local regulations for the sale and serving of milk.

Making sure that all workers, paid and volunteer, comply with local regulations concerning health examinations for food handlers.

Making arrangements for adequate and convenient toilets and hand-washing facilities for pupils and workers.

Providing fire protection.

Eliminating accident hazards such as loose floor boards, worn floor covering, dark stairways, and unsafe installation of equipment.

The Supervising Teacher or Lunchroom Manager

The supervising teacher or lunchroom manager is directly in charge of the school lunch. The school administrator may ask her to look after any of the items for which he is responsible.

Large school systems usually have trained lunchroom managers. In small high schools the homemaking teacher may be in charge. One of the teachers may be chosen to manage the lunch in an elementary school. In a one-room school the teacher or a parent may be in charge.

The responsibilities of the lunchroom manager will vary with the size and type of school. Usually she—

- Makes out the budget.
- Plans the arrangement and decorating of the rooms used for preparing and serving the lunch.
- Plans the menus.
- Plans the work schedules.
- Handles the money and keeps the accounts.
- Plans ways of helping pupils to select well-balanced lunches.

The Classroom Teacher

It is the responsibility of the classroom teacher to make the lunch a part of the education of the child. She works closely with the person in charge of the lunchroom to find ways of using the lunch as a learning experience.

In the classroom she guides the learning that will take place in the lunchroom. She uses the school lunch continually as a means of helping pupils with their daily living. She helps them to learn—

- The foods children should eat to be well-nourished.
- The importance of using safe food, such as pasteurized milk.
- The importance of not wasting food.
- How to plan menus.
- The importance of reading labels when buying foods.
- How to use alternate foods in planning menus.
- The meaning of food rationing.
- How to plan meals using rationed foods.
- Ways of preparing food to conserve food value.
- How to set the table.

- How to behave at the table.
- How to entertain guests at mealtime.
- How to plan and cultivate a garden.
- Methods of storing food.

During the lunch period the classroom teacher helps the pupils to—

- Select well-balanced lunches.
- Improve their table manners.
- Learn to like new foods.

The classroom teacher arranges for pupils to take part in the school-lunch program by having them undertake such activities as—

- Planning menus.
- Marketing for food.
- Helping in the preparation of the food.
- Making posters and pictures for the lunchroom.
- Making place mats.
- Decorating tables.
- Setting tables.
- Serving food.
- Cleaning tables.
- Washing and sterilizing dishes.
- Reproducing menus.
- Raising food for the lunch.

AN ADEQUATE SCHOOL LUNCH

The volunteer or any person interested in a school-lunch program should realize the importance of good nutrition, especially for children.

Good Nutrition Throughout the Child's Life¹

To be healthy, well-nourished, and vigorous, a child must eat the foods he needs. His food requirements are greater in proportion to his age than those of an adult. An adult's food must supply him with energy, keep his body in good working order, and repair worn-out tissues. A child's food must do all of these things and, in addition, must build new tissues constantly.

During early childhood the foods that are eaten should be prepared in simple ways. The diet should have sufficient variety so that even with simple methods of preparation the meals will be interesting and palatable. When the child reaches school age, such foods should continue to be the basis of his diet, but quantities should be increased to care for his greater needs.

The variety of foods may then be greater and new methods of preparation may be used.

The principal change in meals that takes place when a child goes to school is that many children eat the noon meal away from home. Whether the noon meal is eaten at home or at school it should be fitted into the food plan for the day.

In adolescence the boy and girl begin to gain in height and weight very rapidly and they are likely to be extremely active. They may continue to eat the same types of food eaten by younger children, but they should eat considerably larger quantities. Boys of this age are always "starved," and if plenty of food is available they are likely to eat all they need. Girls, however, sometimes have finicky appetites and may fail to get enough of the proper kinds of food.

The chief dietary problem of adolescents is to see that enough food is eaten to meet the greatly increased energy needs. An adolescent boy

¹ Adapted from ROBERTS, L. THE ROAD TO GOOD NUTRITION. U. S. Dept. of Labor, Children's Bur. Pub. 270. 1942.

may be growing so fast that he needs more food than his father; a girl, more than her mother.

Although the adolescent's need for food is great, a boy or girl of this age may not be able to eat enough food to fulfill the energy needs unless foods that are concentrated sources of energy, such as butter, cheese, bacon, cookies, peanut butter, jelly, jam, baked beans, macaroni and cheese, and rice pudding, are eaten in liberal amounts. Such foods may be allowed almost without restriction provided they are eaten in addition to the essential foods—milk, eggs, vegetables, fruit, potatoes, meat, and whole-grain and enriched bread or restored cereals—needed for health and vigor. Some adolescents are likely to need a midmorning and an afterschool lunch in addition to three regular meals a day.

No child can get what he should from his school life unless every part of his body is receiving the food materials that it needs for growth and development. The marks of a well-nourished child are an air of contentment, vigor, and interest in life. His body is upstanding, his eyes are clear and bright, and his facial expression is alert and happy. His general appearance is one of physical fitness—an ability to do and an enjoyment of life.

Signs of Malnutrition

Volunteers, parents, and teachers should be thoroughly familiar with the outward signs of malnutrition because they offer a means of checking on the physical condition of the children in their care. The following signs of malnutrition are adapted from the Official List of Criteria for Recognition of Malnutrition of the National Research Council:²

Infants and Children

Lack of appetite.	Poor sleeping habits.
Failure to eat an adequate breakfast.	Backwardness at school.
Failure to gain steadily in weight.	Repeated colds.
Indifference to normal play.	Abnormal intolerance of light.
Inability to sit.	Bad posture.
	Sores at corners of mouth.

² Prepared for the subcommittee on medical nutrition, Division of Medical Sciences, National Research Council, by a group appointed for this purpose.

Adolescents and Adults

Lack of appetite.	Abnormal intolerance of light.
Chronic fatigue.	Muscle and joint pains, muscle cramps.
Loss of weight.	Burning and itching eyes.
Lack of mental application.	Sore, bleeding gums.
Loss of strength.	Sores at corners of mouth.
Nervousness and irritability.	

Essential Foods for Children

Children must have not only a sufficient amount of food but also the right kinds of food if they are to be healthy. A respect for all foods and the contribution each makes to health and happiness should be understood by all. For good nutrition, children should consume the following foods every day.

- Milk—1½ pints to 1 quart.
- Vegetables—2 servings, one green or yellow.
- Fruit—2 servings, one citrus or tomato and one other, such as apples or prunes.
- Potatoes—1 serving.
- Eggs—3 or 4 times a week, preferably one a day.
- Meat, fish, dry peas or beans—once a day.
- Whole-grain or enriched cereals and bread.
- Butter, or margarine fortified with vitamin A—at every meal.
- Desserts, if appetite allows, after the other foods listed above have been eaten.

For many children the lunch served at school is the main meal of the day; for some, it is the only meal they can count on. It is important, therefore, that the noon meal consist of foods from as many of the above-mentioned groups as possible and constitute a very substantial portion of the day's requirements. The home diet of many children, whether they come from low- or high-income families, contains too many starchy foods, such as macaroni, spaghetti, and white rice, and sweets. These diets are usually lacking in sufficient protective foods such as milk, vegetables, fruits, eggs, and meat. In the school-lunch menus, therefore, these protective foods should be especially emphasized in order to make up for any deficiencies in the meals served in the home. A meal for a complete, well-rounded school lunch will include the following foods:

At least ½ pint of milk, as a beverage or in cooked dishes or both (1¼ ounces of cheddar cheese is equivalent to ½ pint of milk).

Lean and variety meats, fish, eggs, poultry, dry beans, peas, or soybeans.

Two vegetables, or a vegetable and a fruit. An additional vegetable or fruit is desirable.

Enriched, whole-grain, or restored cereals in bread or other forms.

Butter, or margarine fortified with vitamin A.

Dessert, consisting of fruit or a simple sweet. This is optional.

In planning meals for school lunches, the following points should be kept in mind:

Milk, evaporated or dried skim milk may be used as a beverage or in cooked foods such as soup, chowder, scalloped and creamed foods, and puddings. If no milk is served as a beverage, the meal should include two foods made with milk in order that each child may get the equivalent of a minimum of $\frac{1}{2}$ pint of milk. Cheese may be used to satisfy some of the requirements for milk.

Vegetables or fruits (or both) may be selected from a large variety. Emphasis should be placed on the yellow or green leafy vegetables. Raw vegetables should be used often. Fruit and fruit juice, especially the citrus fruits and tomatoes, deserve special emphasis.

Lean meat, fish, and poultry are especially important for their muscle-building value. Variety meats such as heart, liver, and kidney are a valuable source of vitamin A in addition to their muscle-building qualities. Meats form the basis for main dishes and soups and may be used in sandwiches.

Eggs may be used in many ways such as in main dishes, salads, custards, and other simple desserts.

Dry beans, peas, and soybeans may be used as alternates for meats. There are many varieties of them, each region having its common ones, and there are many popular ways in which they may be used.

Whole-grain or enriched bread and other cereal products should be used. Among the whole-grain breads are cracked wheat, whole wheat; rye; corn meal, preferably yellow; and oatmeal.

Butter, or margarine fortified with vitamin A, should be used on bread or sandwiches. Before using margarine the school-lunch worker should seek information from the school administrator concerning State and Federal laws affecting this food product.

Desserts, although not necessary, are desirable. They may consist of fresh, canned, or dried fruits; puddings; and simple cakes and cookies. Dried fruits such as prunes, figs, apricots, and raisins not only satisfy the child's appetite for sweets but add to the nutritive value of the lunch. In various parts of the country, numerous kinds of sweetening may be used. Molasses, cane sirup, sorghum sirup, maple sirup, brown sugar, and honey are particularly good forms of sweetening for desserts for children.

Candy, soft drinks, pastries, and highly seasoned foods have no real place in the school lunch. Candy and soft drinks have little food value for health and protection. The limited lunch money should be spent for an adequate lunch consisting of protective foods. If it has been the custom to sell candies, soft drinks, and pastries, their replacement can be brought about by a carefully planned educational program, which will result in the students themselves suggesting elimination or substitution.

Children should have only foods which are easy to digest and not so sweet or highly seasoned as to impair their taste for simpler dishes. It is best to omit the following from the school-lunch menu:

Rich puddings, pancakes, pastries.

Heavily spiced or highly seasoned foods.

Fat meats, except bacon that has been cooked until crisp.

Tea and coffee. Neither tea nor coffee should be served to children.

Cocoa should be served only occasionally. Its frequent use is likely to destroy the child's appetite for plain milk.

Fried foods should be used sparingly. It is difficult to make good, easily digested fried products because of many important factors. The frying itself is a fire hazard. It is difficult to clarify and store fat properly. Special equipment and skills are needed. Temperature control is important. It is well to remember that fats can be used to much better advantage in other ways, especially when they are scarce.

Pickles and mild relishes may be used occasionally when the children do not choose them in place of vegetables and fruits.

Well-made pastries can be used for special occasions as a treat for children—cherry pie on Washington's birthday may add a festive touch.

THE JOBS TO BE DONE

Every worker in the school-lunch program has a definite job to do. Every job, however small, needs the best effort that can be given to it. If one job is left undone the whole program suffers. Experience has shown some of the better ways of doing these jobs.

Meal Planning

Food preferences vary in different sections of the country and among different racial and nationality groups. The school lunch, therefore, should be planned in a way to make the food acceptable to the children. This does not mean that the meals should be limited to a few familiar foods prepared in familiar ways; a balanced diet is most easily worked out when it includes a wide variety of foodstuffs. Learning to like new dishes is important in building good habits and in training a child for living.

Good food, simply prepared, may be served in enough different ways to give variety and offer the best educational opportunities. School lunches should be planned by the week. Meals planned for longer than a week in advance almost always have to be changed. Plans that are made on Thursday or Friday for the next week allow time for ordering and marketing for early delivery on Monday morning. If the lunchroom manager has had training in nutrition she may make the menus. In some cases they may be made by the home economics teacher, a nutritionist in the community, or a committee chosen especially to do this work.

In any case all meal plans should be checked carefully by the standards for an adequate lunch. (See pp. 7-8.)

In some large communities the menus for all schools are planned in a central office. This type of planning saves time and makes buying simpler. Buying in quantity is more economical.

The person or persons who are planning the lunch should plan to use available foods as the starting point or basis of the menu. They should investigate all sources of food. If certain foods are in special abundance in the markets, plans should be made to use them; and if used repeatedly throughout the week, they should be used in a way to gain variety and avoid same-

ness. For example, if cabbage is plentiful, it may be used the first day as cole slaw, the second day as buttered cabbage, the third day as a casserole dish, the fourth day in apple, raisin, and cabbage salad, and the fifth day in soup.

Meal planners for the school lunch will find by experience that there will be only about 15 to 20 main dishes that are suitable for and well-liked by children. Foods with a new "twist," especially unusual combinations, are not liked by children generally. Adults often prefer to make something new because it is less monotonous than standard favorites, such as vegetable soup or macaroni and cheese. They will find that a basic list of 15 to 20 stable favorites will give the child a different but well-liked dish almost every day in the month.

Menu Patterns

The basis of a school-lunch menu should be a substantial main dish, one which provides building materials for the body. From that foundation, various patterns can be developed, each depending on the ingredients which go into the main dish. If it is not possible to serve a complete meal every day, special care should be taken to see that the menus served during the course of a week contain all the different types of food that children need. One way of accomplishing this is to follow a different menu pattern each day in the week.

The following are suggested as acceptable patterns for the school lunch. When fruit is suggested in these menus it may be fresh, in season; or home or community canned or dried.

PATTERN A

Meat, fish, or eggs combined with
or supplemented by one or more vegetables
Whole-wheat bread—buttered
Fruit
Milk

Example 1

Meat loaf
Baked potato Spinach
Whole-wheat bread—buttered
Applesauce
Milk

Example 2

Scalloped eggs and peas
Enriched white bread—buttered
Fruit
Milk

PATTERN B

Substantial sandwich (meat, fish,
eggs, cheese, peanut butter)
Vegetables (as vegetable plate, soup,
or other combination)
Cereal dessert
Milk

Example 1

Baked beans, beets, cole slaw
Peanut butter sandwich
Corn meal and raisin pudding
Milk

Example 2

Creamed mixed vegetables
Chopped meat sandwich
Rice pudding
Milk

PATTERN C

Salad containing meat, eggs, or cheese
and vegetable
Whole-wheat bread—buttered
Fruit
Milk

Example 1

Cottage cheese and tomato salad
Oatmeal muffins—buttered
Baked apple with milk
Milk

Example 2

Egg and potato salad
Whole-wheat bread—buttered
Fruit
Milk

PATTERN D

Vegetable or fruit salad
Substantial sandwich (meat, eggs,
cheese, peanut butter)
Cake or cereal dessert
Milk

Example 1

Apple, orange, and prune salad
Cheese sandwich, whole-wheat bread
Oatmeal and raisin cookies
Milk

Example 2

Stuffed egg and vegetable salad
Peanut butter and pickle sandwich
Gingerbread
Milk

PATTERN E

Cereal combined with meat, fish, or cheese
Raw or cooked vegetable
Enriched bread—buttered
Fruit
Milk

Example 1

Rice with cheese sauce
Raw carrot sticks
Whole-wheat muffins—buttered
Raw apple
Milk

Example 2

Meat loaf combined with oatmeal
Buttered string beans
Enriched white bread—buttered
Fruit
Milk

PATTERN F

Main dish using cheese or milk or both
Vegetable
Enriched bread—buttered
Dessert using milk

Example 1

Cream of potato soup
Raw carrot and cabbage salad
Brown bread—buttered
Rice custard

Example 2

Macaroni with cheese
Spinach
Whole-wheat bread—buttered
Baked custard

One-Dish Meals

When the school lunch is limited to the one-dish type of meal that dish should be sufficiently substantial and served in sufficient quantities to satisfy the appetites of the children. It should combine different types of food to give nutritive balance. Variety during the course of a week should be obtained by serving a different type of dish each day. When fruit is available, it should be used to supplement the main dish. It is highly desirable that enriched and whole-grain bread, and butter, or margarine fortified with vitamin A, be served daily. Milk to drink should be provided. This is even

more important when the prepared dish does not contain milk.

The basic combinations for satisfactory one-dish meals are:

Meat, fish, cheese, or eggs combined with vegetables, as, for example—

Beef stew with potatoes, carrots, and onions.

Creamed fish, rice, and peas.

Scalloped eggs and potatoes.

Nourishing soups, such as—

Cream soups made with milk and finely chopped vegetables.

Vegetable soup, containing a variety of vegetables, with rice or other cereal to thicken.

(May be made with or without meat stock.)

Chowders made with salt pork or bacon, vegetables, and milk (may contain meat), for example—

Corn and bean chowder.

Fish chowder.

Cracked-wheat chowder, with potatoes, carrots, and onions.

Hominy, rice, spaghetti, or other cereal product in combination with meat, fish, vegetables, or cheese, as, for example—

Spanish rice (using tomatoes and onions).

Hominy with cheese sauce.

Baked noodles with fish.

Cereal pie (corn meal, meat, tomatoes, onions).

Factors Determining the Type of Meal Served

The general type of meal to be served—a complete meal, a single dish, or something between the two—will be determined by a number of factors.

Amount of Labor Available

When the number of workers is small in proportion to the number of lunches served, dishes requiring a minimum amount of work in preparation should be selected. For example, mashed potatoes require washing, peeling, cooking, and mashing. Potatoes may be cooked and served in their jackets. This would not only save labor but also the valuable vitamins and minerals which lie just under the skin of the potato. Carrots may be washed thoroughly and used without scraping, unless they are old or of poor quality.

Ability of the Cooks

Inexperienced workers, as a rule, are a bit confused at first with the problems of large-quantity food preparation; therefore, it is advisable to start with simple dishes. Later, when

more confidence and ability have been developed, more complex dishes requiring special skills may be prepared.

Cooking Facilities Available

In planning for hot dishes and baked foods, the amount of stove and oven space must be taken into consideration. If space on top of the stove is adequate the main dish and the vegetables may be prepared separately; if only one burner is available a stew, a soup, or some other combination will have to be prepared. It is possible to cook more than one food even in a small oven if the cooking time is staggered so that different dishes can be cooked at the proper time. For example, the meal planner would not use the one oven for two dishes which need last-minute cooking; instead, she would plan one dish which could be baked earlier in the morning, thus freeing the oven space for another food to be cooked just before serving.

If food is prepared in a central kitchen, the types of containers used in transporting it to the schools will govern the kinds of dishes included in the meal.

Season of the Year

At any season of the year the school lunch should be a substantial meal, preferably including a hot dish. It is possible, however, to have a well-balanced lunch without a hot dish. The kinds of food and the types of dishes should be varied to adapt meals to foods available in different seasons.

Pleasing Food Combinations

In planning meals the appearance and palatability of foods to be served together should not be overlooked. Children will learn more readily to enjoy a variety of wholesome foods if the meals served are pleasing in combination of color, texture, and flavor. The following are suggestions for planning meals which should be interesting to children.

Color

Color may give a pleasing appearance to foods. The sight of attractive food will start the flow of digestive juices before the food is tasted. A meal which is all the same color is not as interesting as one which has a mixture of

contrasting colors. The following menu is an interesting combination of color:

Deviled eggs, with cream sauce
Whole-wheat bread and butter sandwich
Raw apple (unpeeled) and cabbage salad
Molasses cookies
Milk

Repetition of color should be avoided. For example, carrots, sweetpotatoes, and oranges used in the same meal will be less pleasing because of monotony of color. Clashing color combinations such as tomatoes and red cabbage should be avoided.

Although color is an important factor to consider in planning meals, ordinarily it should not be carried to an extreme by planning meals around a definite color scheme. However, various holiday seasons and festivals may suggest motifs and colors which can be used effectively. These may be used to stimulate student interest in the school lunch.

Texture

Texture and consistency of foods are important factors in planning meals. There should be variety in the texture of foods that are served together. Meals which combine soft, crisp, and firm-textured foods will teach a child to chew properly, which will aid in maintaining a healthy condition of the mouth. Contrast in texture may be accomplished as follows:

- Serving toasted biscuit, bread, or crackers with soups and creamed dishes.
- Serving some uncooked foods, such as carrots, cabbage, turnips, celery, or apples, at each meal.
- Cutting vegetables for cooking in pieces large enough so that they will not lose their identity in preparation.
- Baking vegetables and fruits, such as potatoes and apples, in the skins.
- Not overcooking vegetables and fruits.
- Serving foods that do not repeat methods of preparation. For instance, buttered peas instead of creamed peas with creamed eggs.

Children pay as much attention to the consistency of food as adults do. Thick (pasty) white sauces, stiff cornstarch puddings, or soups that are too thick or too thin are often refused by children because of their unpalatable appearance and consistency. On the other hand, baked custard that has a jelly-like consistency is interesting to a child because it is both soft and firm. Very dry foods are often objectionable to chil-

dren. A dry bread pudding would not be appealing, but the same pudding served with a custard sauce might be very popular.

Flavor

Contrasting food flavors make meals more appetizing to children as well as to adults. A meal composed entirely of mild-flavored foods lacks variety. One containing too many strong-flavored foods will usually not appeal to the appetite.

The following menu illustrates an interesting flavor combination:

Fish loaf—tomato sauce
Potatoes—boiled in jackets
Raw carrot and turnip strips
Whole-wheat bread—buttered
Raw apple
Milk

Most meats and fish have a pronounced flavor and should, in general, be served in combination with mild-flavored vegetables. Eggs and chicken are not so pronounced in flavor and make a better combination with strong flavored vegetables.

Repetition of flavors in a meal such as tomato soup and tomato salad or apple salad and apple sauce should be avoided.

Common food likes and dislikes should be considered when combining flavors. Foods which are generally liked should always accompany dishes that are not so well-liked. This is an important factor in teaching children to like certain foods. For example, many children do not like liver. It is possible to add a small serving of liver to a popular food combination as a sort of bonus. The children are tempted to try it and gradually learn to like it. If a study of the food values of liver precedes the serving of it, the children will have an entirely different attitude toward this food.

Variety in Preparation

Even though the number of foodstuffs available for the school lunch is limited, variety in menus can be secured from day to day by combining the same foods in different types of dishes. Such commonly available foods as potatoes, carrots, milk, cheese, whole-wheat flour, apples, and prunes could be used as the basis of quite different menus, such as the following:

Cream of potato soup
 Whole-wheat bread and cheese sandwich
 Raw carrot sticks
 Prune-filled baked apple
 Milk
 Scalloped potatoes and carrots with cheese
 Whole-wheat muffins
 Apple and prune salad
 Milk
 Baked potato—Buttered carrots
 Applesauce
 Whole-wheat cheese muffins
 Stewed prunes
 Milk

The use of a different menu pattern each day in the week will help to assure variety. The same pattern, however, and particularly the same menu or the same dish, should not be used regularly on a certain day of each week. Children may lose interest in their lunch and their appetites may be less keen when they know in advance just what to expect on a given day.

Purchasing and Checking Food and Supplies

The worker in charge is usually the person who makes out the market order. The order is made out once a week. It should be sent to the place or places where foods are purchased before the week end preceding the week of use. All nonperishables or semiperishables for the week should be sent in on Monday morning. Only those foods which are highly perishable should be delivered on the day they are used. If delivery service is limited, menus should be planned to use the perishables early in the week and save the nonperishable foods for the end of the week.

Quantities to Order

The quantity of food to be ordered should be carefully considered. The size of the serving is usually recorded on large-quantity recipes. It should be decided whether the amount allowed for each child will be sufficient. The following additional factors must also be considered:

Age of Children

Younger children usually require less food than older children. Quantities of food prepared may need to be increased with the increase in age of children served.

Number of Servings

Experience will soon teach the person in charge how many children desire second and third helpings. The aim of the manager should be to plan to have an ample supply, but, at the same time, to avoid food waste. The Marketing Guide, pages 28 and 29, will be of assistance in determining amounts to be purchased.

Type of Meal

If a one-dish meal, such as macaroni and cheese, is planned a larger quantity of these foods will be needed than if the meal is to include three or more foods in combination, as macaroni and cheese with stewed tomatoes and cole slaw. The quantity of food to be ordered will depend on whether it is to be the whole or only a part of the lunch.

Day of the Week

Children may require more or less food at different times. After holidays, for example, some children may be unusually hungry. Children who are extremely undernourished or who have acquired poor habits of eating may require the utmost patience on the part of the workers and teachers while they are becoming adjusted to a normal food intake. It may require several days for the child who receives his only well-balanced meal at school to adjust his appetite to normal amounts of food. He may not be able to eat as much food as is required for his physical needs or he may desire an abnormal quantity. In either case, a normal adjustment is usually made within a few weeks at the most.

Checking Food and Supplies

As soon as possible after delivery, all food should be checked against the order to make sure amounts are correct and that there are no omissions. It is well to keep a supply of staples on hand. The use of a jot-pad will be helpful. As soon as supplies of such items as salt, soda, baking powder, and vanilla become low this fact should be noted on the pad. This practice saves time in making out market orders.

Planning the Work

Work Plans

If a school-lunch program is to be run in a businesslike way it will be necessary for all

workers to plan their work. This not only saves time but makes the job easier. Workers will not be so tired at the end of the day if they plan carefully before starting the job. Time and energy will be saved if these few suggestions are followed:

Decide which job will take longest to do and start it first.

Be sure that directions for doing a job are understood before the job is started.

Collect all material needed for a job before beginning. Many steps are wasted by going back and forth to the storeroom, cupboards, or refrigerators for supplies that could have been collected at one time. The materials needed should be placed at or near the place the job is to be done.

Use trays to carry supplies, dishes, and cooking utensils from one place to another. If there is a cart in the lunchroom, workers should use it to carry supplies. This will save much time and many steps.

Keep work tables clean and in order while doing a job.

Wash dishes and cooking utensils as they are used and put them away.

An Example of Planning Work

If one person is to do all the work on a school-lunch unit she will need to plan carefully not only the program as a whole, but also each step in her work. Suppose, for example, her meal plan is to prepare and serve:

Baked potato Raw carrots
Buttered string beans
Whole-wheat bread—buttered
Custard
Milk

Here is a meal plan that requires use of the oven for two dishes—baked potatoes and custard. If only one food can be baked at a time, obviously the worker should plan the best sequence of doing this work and also plan the time each job should be finished in order to have everything ready for serving on time. This is how she could plan. She could bake the custard the day before while doing the dishes. It would then be cool before she left for home and could be put in the refrigerator to chill thoroughly. If the school has no refrigerator she should not make custard the day before. Instead she should plan to have a fruit dessert.

In the morning her first job would be to scrub the potatoes. While the potatoes were baking she would prepare the carrots and beans, and cook the beans. She would then wipe and set the tables.

Getting Ready for the Next Day's Lunch

Planning ahead makes every job easier. The menu for the next day should be studied and supplies checked to see if everything needed is on hand. Some supplies may have to be ordered.

Such jobs as the following may be done to make the next day's work easier:

Bread, muffins, rolls, and simple cakes and cookies may be baked and are just as good as those baked on the day served. Day-old breads are generally considered better for children.

Dry beans, peas, and fruits may be washed and soaked. They should be kept in a cool place to prevent fermentation.

Desserts such as baked apples, applesauce, and stewed fruits may be prepared. These will not spoil and usually children like them cold.

Salad dressing may be made if stored in a cold place.

In some school-lunch programs the lunchroom manager will arrange to have workers come at different hours. Some will report early and some later. The workers who report later will stay longer and make preparations for the next day's lunch. This plan of arranging hours of work makes it possible to serve better meals.

Food Preparation

When foods are selected to provide high nutritive quality, care should be taken to preserve it. Essential food values so easily lost are vitamins and minerals. Food should be prepared to save the vitamins and minerals and also to make it as digestible as possible.

The nutritive value of food has three enemies—air, heat, and water. The best methods of preparation are those that save food from exposure to air, heat, and water.

Air

Avoid peeling fruits and vegetables wherever possible. For example, potatoes may be cooked and served in their jackets—either boiled or baked. The skins of highly colored fruits and vegetables usually contain important food values and when edible should be used often in food preparation for children. Uncooked fruits

and vegetables that have been cut into pieces or shredded should not stand long before cooking or serving. If it is necessary to expose them to the air for a short time when in the raw, cut, or peeled state, they should be kept covered and cold.

Heat

Eggs, cheese, and meat should be cooked at low temperature to prevent toughening and to make them more digestible. Fruits and vegetables should be cooked in as short a time as possible. If green vegetables are overcooked they turn an unattractive brownish-green color. White vegetables such as potatoes, turnips, cabbage, and onions turn gray from overcooking or from standing after cooking. If cooked vegetables must wait for late comers, they should be removed from the stove, cooled quickly, and then reheated just before serving.

Water

Fresh fruits and vegetables should not be soaked before cooking or serving. Dry beans should be washed first, then covered with warm water to soak and cooked in the same water. Small amounts of water should be used in cooking vegetables and fruits. For example, spinach should be cooked immediately after washing, without adding any water since sufficient water clings to the leaves. Water in which vegetables have been cooked should be saved for soups and sauces.

The natural color should be retained in foods by the method of cooking rather than by a color preservative. For instance, soda added to green vegetables in cooking may preserve the green color, but it destroys much of the food value and often produces a slimy texture.

The flavor of scorched food may cause a child to dislike that food all his life. Special care is necessary to prevent scorching when milk is used in cooking. Scorching may be avoided by cooking in a double boiler or by placing the pan of milk or cream sauce on a rack in a larger container of hot water.

Seasonings should be used to bring out and not to cover up the natural flavor of foods. Salt should be used for a child's food in smaller quantities than is used for an adult's. Pepper and spices should be used sparingly, if at all.

Careful handling of food and proper methods of cooking are essential. Too much emphasis cannot be placed on the responsibility of the school-lunch worker for preparing attractive and palatable lunches. Indirectly she is responsible for establishing good food habits in children, for they will not learn to eat the proper food unless it is prepared in an appetizing manner.

How to Use a Recipe

Use of Tested Recipes and Standard Measurements

It is essential that workers be provided with dependable, tested quantity recipes for the number of servings required. Good materials, without reliable recipes, cannot be expected to result in superior dishes. The use of tested recipes helps to—

- Insure good food products when good materials are used.
- Control the number of servings.
- Avoid expense from waste of time and materials since poorly prepared foods cannot be served or, because of poor preparation, are not eaten.
- Prevent children from forming the habit of not liking certain foods because of poor preparation.
- Relieve the worker of the responsibility of experimenting with school supplies, which is necessary when she attempts to increase small-quantity recipes.

Reliable recipes lose their value if coffee cups, dessertspoons, or saucepans are used to estimate measures or if a "pinch" of salt or other ingredients is relied upon as an acceptable measure. Standard measures are essential to the preparation of good food and are a good investment for any school kitchen. They may be purchased for a very small sum. Necessary standard measures include the following:

- Half-pint measuring cup which indicates $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1-cup measures. These may be had in nests that include $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1-cup sizes.
- Standard measuring spoons in sets, including $\frac{1}{4}$ teaspoon, $\frac{1}{2}$ teaspoon, 1 teaspoon, and 1 tablespoon.
- Quart and gallon measures should be included if 25 to 50 servings are prepared.
- If two measures are used, one for liquid and one for dry ingredients, it will save the necessity of washing them between times.

Another important factor in the use of standard recipes—in fact a necessity in the production of good food—is accuracy in measuring. All standard recipes are proportioned for level measurements. "Scant" or "heaped" or "slightly rounded" are not dependable terms in measuring foods. Success in preparation and in accuracy of number of servings depends on level measurements.

To increase quantity recipes it is safer to make one recipe two or three times rather than to double or triple the amount of each ingredient. For example, in preparing food for 150 children, a recipe for 50 servings might be used, but it should be made three times, in order to insure better flavor and more uniform texture of the food.

Measuring Ingredients for a Recipe

All materials needed for a recipe should be collected and measured before mixing is started. All work that is necessary before measuring, as the sifting of flour, should also be done before starting to mix the food materials. Use only the materials that the recipe calls for unless it is necessary to substitute an alternate food. Do not add extra seasonings.

Flour

Sift once before measuring. Dip flour lightly into measure and do not pack it. Too much will be used if it is packed. Level off the top of the measure with a spatula or with the back edge of a knife.

White Sugar

Break up lumps and fill the measure. Level off the top with a spatula or straight knife.

Brown Sugar

Fill the measure. Pack firmly. If sugar is lumpy put in a pan and heat for a short time in a slow oven to soften the lumps before measuring. Level off the top with a spatula or straight knife.

Baking Powder, Salt, or Spices

Dip the spoon into the baking powder, salt, or spice to fill it. Level off lightly with a spatula or with the back edge of a knife.

Fats

One of the following methods may be used:

Solid pack. Pack solidly into the measure, without air spaces. Level off the top with a spatula or the straight edge of a knife. For $\frac{1}{4}$ cup of fat use 4 level tablespoonfuls.

Water displacement. To measure $\frac{1}{2}$ cup of fat, fill the measuring cup $\frac{1}{2}$ full of water. Add fat until the water reaches the top of the cup. Drain off the water.

(NOTE.—A 1-pound package of fat equals 2 cups. For 1 cup of fat divide the pound into two equal parts.)

Using Equal Measures and Weights

It is sometimes necessary for cooks to know equal measures and weights in order to follow a recipe exactly.

Equal measures:

3 teaspoons	= 1 tablespoon	2 cups	= 1 pint
4 tablespoons	= $\frac{1}{4}$ cup	2 pints	= 1 quart
8 tablespoons	= $\frac{1}{2}$ cup	4 quarts	= 1 gallon
16 tablespoons	= 1 cup	4 pecks	= 1 bushel

Equal weights:

1 ounce (liquid)	= 2 tablespoons
8 ounces (liquid)	= 1 cup
1 pound (liquid)	= 1 pint
1 pound (dry or liquid)	= 16 ounces

Weights of Some Commonly Used Foods

The following foods are used frequently in preparing school lunches. Knowing the weights of these foods will help the worker in figuring the number of servings and in keeping accurate records.

Products:	Approximate pounds per bushel
Apples.....	48
Beans, dry.....	60
Beans, snap.....	30
Beets.....	52
Carrots.....	50
Salad greens (kale, mustard, cress, turnip) ..	18
Onions.....	50-57
Parsnips.....	50
Peaches.....	48
Pears.....	50
Peas, dry.....	60
Peas, in hull.....	30
Potatoes, white.....	60
Sweetpotatoes.....	55
Tomatoes.....	53
Turnips.....	54

Weights and Measures of Canned Foods

Size of can	Average weight	Measure	Servings
Number 1 (picnic) (condensed soups) ..	10 $\frac{1}{2}$ ounces.....		2
Number 2.....	1 pound, 4 ounces...	2 $\frac{1}{2}$ cups	5
Number 2 $\frac{1}{2}$	1 pound, 12 ounces..	3 $\frac{1}{2}$ cups	6
Number 303 (fruit juices).....		5 $\frac{3}{4}$ cups	12
Number 10.....	6 pounds, 4 ounces..	13 cups	23

Substituting One Food for Another in a Recipe

It may sometimes be necessary to substitute one food for another in recipes. The following substitutions may be made:

Whole milk

If the recipe calls for milk, any kind of milk may be used as follows:

Canned evaporated milk.—If the recipe calls for 1 cup of milk, use $\frac{1}{2}$ cup of canned evaporated milk and $\frac{1}{2}$ cup of water.

Dried milk.—To make dried milk into liquid milk, use the following directions:

Sprinkle 1 cup of milk powder over the surface of warm water in a mixing bowl. Beat with an egg beater

or fork. As paste forms on the side of the bowl scrape it into the water and continue beating until the fluid is smooth. Milk powder blends too slowly when *cold* water is used. The powder may become lumpy or gummy if *hot* water is used. Pour the blended milk into sterile jars and keep covered in a cold place until ready to use.

Buttermilk or sour milk.—If soda is added, buttermilk or sour milk may be used in bread, cake, and cookie recipes. Allow $\frac{1}{2}$ teaspoonful of soda to 1 cup of sour milk or buttermilk, and use $\frac{1}{2}$ of the baking powder given in the recipe. Sweet milk or canned milk may be soured by adding 1 teaspoonful of vinegar to 1 cup of milk.

Fats

Bacon fat may be used instead of butter as seasoning. Margarine may be used instead of butter (when the recipe calls for fat).

Cocoa

Three tablespoonfuls of cocoa and $\frac{1}{2}$ tablespoonful of margarine or butter may be used in place of 1 square of chocolate.

Flour

Two tablespoonfuls of flour may be used in place of 1 tablespoonful of cornstarch for thickening.

Fruit juice

Left-over fruit juice may be used in place of water or part of the milk in making puddings or sauces.

Vegetable water

Water in which vegetables have been cooked may be used in soups, gravies, or for diluting canned milk for creamed vegetables.

Oven Temperatures

The following oven temperatures should be used in baking:

Slow:

Very slow oven.....	250° F.
Slow oven.....	300° F.
Moderately slow oven.....	325° F.

Moderate:

Moderate oven.....	350° F.
Moderately hot oven.....	375° F.

Hot:

Hot oven.....	400° to 425° F.
Very hot oven.....	450° to 500° F.

Serving the School Lunch

In serving school lunches, it should be kept in mind that children do not wish to spend all the lunch hour in eating, nor do school superintendents wish to use more time than the assigned lunch period for serving food. If the service is regarded as an opportunity to teach good food

habits and table manners, as it should be, enough time must be allowed so the child will not feel rushed while eating. Each child should spend 15 to 20 minutes at the table, and more time should be given if necessary. Children should not be permitted to eat in 5 or 10 minutes, in order to get out on the playground or to make room for other children to be served.

If these objectives are to be attained, careful and detailed plans for serving must be made with the school administrator. When large numbers of children are being served and the facilities are limited, it will be necessary to schedule several serving periods. This plan of operation can be successful only when school authorities and lunchroom workers cooperate to the fullest extent.

Preparation for Serving

Jobs should be scheduled by the lunchroom manager so that everything in the kitchen and lunchroom is in readiness for serving 5 to 10 minutes before the children are to be served. This will mean that dishes used in preparation have been washed, that all serving tables are cleared and cleaned, and that the lunch tables have been properly cleaned and set. In some types of services they would be completely set; if cafeteria service is used they may be only partially set.

The tables should be carefully and correctly set with a fork, teaspoon, glass, and napkin for each child. Each place should present a unit so there will be no confusion in placing the plate. Space enough should be allowed so that children will not feel crowded in eating. If the salad is served on a separate plate, as may be done if soup is served also, it may be placed on the table but should not stand long enough to wilt. Glasses or cups may be filled from a pitcher a short time before the children are served. If a dessert is included, it may be placed on the table. This may not be desirable, however, for some children may want to eat the dessert before the main course.

Extra plates, cups, forks, and spoons should be in readiness to be used if needed.

All foods included on the menu should be ready for serving at least 5 minutes before serving time. Good food service does not permit

children to wait while another pan of food is baked, nor does it include vegetables that have been prepared so long before serving that the texture and flavor are impaired.

Methods of Serving

The method of serving that is best adapted to the space available and the number to be served should be used. The work should be organized and the food service scheduled so that there will be the shortest possible period between the preparation of food and the time it is eaten. Food that is permitted to stand after preparation often acquires an unpleasant texture or consistency. Food should not be served extremely hot, however, as children often acquire a dislike for certain foods because they have been burned when such foods were served too hot.

There are three common methods of serving school lunches:

Cafeteria Service

This method is recommended where a large number of children must be served during one serving period. The cafeteria service is most successful when—

Tables are set with silver, napkins, salads, desserts, and milk before the children come to the lunchrooms.

All food is in readiness so that the service moves quickly.

Children do not wait for the whole group to be served before starting to eat. Those at each table start to eat as soon as served.

Children return to the serving line for second servings.

As children finish eating (15 minutes should be the minimum time allowed at tables) they carry their used dishes to a table where they are stacked for washing.

When the cafeteria type of service is used it may be desirable to serve the primary grades in their own rooms, where the children may sit at their work tables to eat. If this is done, the food should be served from a table in the primary room, each child carrying his own plate to his table. Teachers often prefer this service for small children because of the educational opportunities in self-help and in eating as a group. This group should be served earlier than the older children so that there will not be a conflict

in time. Paper napkins or table mats of white or bright-colored material may be used under each plate. More time should be allowed for younger children to eat than for the older ones. Some children need as much as 30 minutes to eat all their lunch.

Service at Tables

In this method of serving, the food is served on individual plates which are placed on the tables just before the children arrive in the lunchroom, or just after they are seated. This is a satisfactory type of service for small groups and may be successfully used when large numbers of children are scheduled to eat at different periods in smaller groups. The following points should be observed when this plan is used:

The time between preparation and serving should be so short that the flavor, texture, and temperature of the food are not affected.

The served plate should present an attractive appearance. The different foods should not run together or be spilled on the edge of the plate. Servings should not be too large. Instead of placing all the food a child may want on his plate at one time, second servings should be given. Second servings of food should be served from bowls, not from cooking pans.

If milk is served in bottles, they should be placed on the table just before the children arrive.

It is desirable for children at one table to remain at the table until all have finished.

Service in the Classroom

This method of serving the lunch may be necessary when a lunchroom is not available. Usually it is possible to arrange the desks or tables so that pupils may eat together in small social groups. It is advisable, wherever possible, that the food be carried to the classroom in containers and served there from a serving table. The children should not have to go to the kitchen to be served.

Cafeteria service may be used in the classroom or individual plates may be served to the children at their desks or tables. The latter method should be followed for a small group or for young children.

Service of Foods

It is important for workers to remember that little children do not eat as much food as older children and grown people. It is better to give

second helpings than to make the first helping too large. Sometimes children will not eat at all because they have too much food on their plates.

The served plate should be attractive. The appearance of food has a very real effect on the attitude of the child toward his lunch. A combination of foods all soft and "runny" makes a very unattractive plate. Food served carelessly, with the result that the plate looks "messy," actually delays the secretion of digestive juices.

Temperature of foods should be carefully considered. Hot foods should be served hot and cold foods cold.

The workers should check returning plates in order to see what is not being eaten. This will help in correcting various mistakes in food preparation. Children leave food because—

- The recipe was not followed and the food did not taste good.
- The food was scorched or improperly prepared.
- The food was too dry.
- The food did not look nice on the plate.
- The servings were too large.
- Food that should be hot was served cold.
- The dish had been served too often and the children had become tired of it.
- The food was new to the child.

As soon as it is learned why foods have not been eaten, it will be easy to avoid making the same mistake again. It will also show whether there is need for additional help in introducing the children to new foods and combinations.

Care and Storage of Food

It is important to take good care of food. Most food spoils easily, and spoiled food causes children to be sick. Food which is carelessly handled and poorly stored loses much of its vitamin value. Dust and dirt carry harmful bacteria.

All food served in a school lunch should taste good, look good, and be absolutely free from any suggestion of taint. No spoiled food of any kind may be served. If there is any question about the freshness or good condition of a food, it should not be used. Food which may seem to be even slightly tainted should never be served. Every school-lunch worker should know how to handle food correctly.

The Care of Food

The following simple rules should be observed in caring for any foods:

- Keep all food covered and away from dust.
- Store perishable foods in a cool place, preferably in a refrigerator.
- Protect all food from flies, roaches, ants, and mice.
- Keep all staples in clean, covered cans or jars in a cool place.

Certain kinds of food need special care. School-lunch workers should follow the instructions given below in caring for the different kinds of food.

Milk

If milk is not taken care of properly it can do a great deal of harm. Disease germs grow rapidly when milk stands in a warm room or is left uncovered. It should be kept cold, covered, and clean. As soon as the milk is delivered, the container should be wiped clean and then placed in the colder part of the refrigerator. When cooking, only the amount of milk and cream needed at that time should be taken out. Milk should never stand longer than is absolutely necessary in a warm place. Left-over milk or cream should be returned to the refrigerator immediately after each meal, but it should never be poured back into the main supply. Milk should be kept away from foods that smell, such as fish, onions, cabbage, and melons. Empty milk containers should be rinsed in cold water, washed with hot suds, scalded, and dried in the sunshine if possible.

Meat and Fish

Meat and fish should be kept in a refrigerator or in a cold room away from dust, dirt, and flies. They should be brought out only when being prepared for cooking.

Fresh meat should be covered loosely and wiped with a damp cloth just before being cooked. Fresh ground meat should be stored in an extra cool place and cooked soon thereafter.

Meat broth should be cooled rapidly, kept cold, and used within a short time.

Cooked meat should be kept covered. Chopped and sliced cooked meats spoil more quickly than meat in the piece; therefore, they should be cut or chopped just before using. Meat sandwiches

and salads should be kept cold right up to serving time.

Well-cured meat should be kept in a dark, cool, dry, airy place until it is to be cooked. Wrappings should be left on ham, bacon, and other cured meat until they are to be cooked. Mildly cured meats should be treated like fresh meats.

Butter

Butter should be kept covered, clean, and in a cool place.

Vegetables

Fresh vegetables should be kept clean and in a cool place. They should be protected from rats, cockroaches, and other pests. The fresher the vegetable the better the taste, the less the waste, and the more vitamins retained. "Wilt not, waste not," is a golden rule for all garden products.

Greens such as lettuce and celery and all raw vegetables to be used for salads should be washed, drained, and stored in covered vegetable pans in a cold place to keep crisp. Cooking greens such as mustard and kale should be washed, drained, and piled loosely, so as not to be bruised, in covered vegetable pans or waterproof bags and kept in a cold place until ready to cook.

Corn should stay in the husk and beans and peas in the pod until just before they are cooked unless they can be stored, tightly covered, in the refrigerator. To hold their sweetness, these vegetables should be kept cold.

Cauliflower, brussels sprouts, broccoli, and other vegetables of the cabbage family, lose their freshness faster than does cabbage. They should be left uncut and kept cold but not too dry.

Squash needs dry, cool storage.

Beets, turnips, rutabagas, carrots, and other root vegetables should be kept in a cool, well-ventilated place. Sweetpotatoes, white potatoes, and onions keep better in a dry, cool, dark place but not cold enough to freeze.

Canned vegetables that are not used in preparing a recipe may be left in the can provided the can is kept in a cold place. They should be kept cool and covered.

Fruit

Fruit should always be washed carefully before it is peeled or served. Germs that collect on the skin and around the stem and blossom ends, as well as poisonous fruit spray, are removed by thorough washing and peeling. Failure to wash fruit often causes diarrhea. All decay should be cut out of fruit. Oranges, lemons, and grapefruit that have soft spots may have to be discarded.

Bread

Bread should be kept in a closed bread box or other tin container that has a few holes in the top or sides to let in a little air. Bread that is moldy should not be served.

Eggs

Eggshells should be washed before being broken but not before the eggs are stored. Eggs that are washed do not keep well. Eggs should be kept in a cold place.

Left-Over Food

Food that is left over should be protected from dust and flies at all times. Left-over cooked food should always be kept in a cold place.

Canned Food

All canned food should be stored in a cool, dry place. It is important to know when canned food is not safe to use. The following things indicate that canned food is unsafe: Bulged ends of the can; leaking can; liquid squirting out when can is opened; an unusual or peculiar odor; mushy, slimy, moldy, or soft appearance of the food. Canned food which is suspected of spoilage should never be tasted. It should be discarded and burned.

Cleaning the Storage Space

Every school should have some space for keeping food supplies. The storage space may be a separate room in a part of the building away from the kitchen and lunchroom. Sometimes it is a closet in or near the lunchroom. When space is scarce the supplies may be kept on shelves or in a cupboard in the kitchen.

Regardless of the location and size of the storage space it must be kept clean and in good

order. Many times food is wasted by spoiling because it has been kept in a dirty place.

Every person who uses the storage space should have a part in keeping it clean. Food and supplies should always be kept in their proper places. Any food spilled on the floor or shelves should be cleaned up immediately. The floors, walls, woodwork, and shelves in the storeroom should be cleaned the same as those in the kitchen or lunchroom.

To keep the storage space clean and in good order the workers should—

- Arrange everything neatly on shelves, racks, or tables or in bins.

- Place baskets or bags of vegetables and fruits on racks or tables, not on the floor.

- Keep empty boxes, jars, newspapers, and cleaning supplies in neat order in the part of the space used for that purpose.

- Keep flour, sugar, cereals, beans, and other food staples in covered containers of metal, wood, or glass. Any wooden tubs used should be cleaned well before food is stored in them. If butter tubs, for example, are not clean, the flavor of rancid butter will seep into any food stored in them.

- Air the storeroom so that it will have a fresh, clean smell. Sort stored vegetables and fruit often. One spoiled potato, onion, or orange will quickly spread spoilage to others in the bin.

Dresses, hats, coats, shoes, or other wearing apparel should not be put in the storeroom.

Dishwashing

Proper dishwashing is essential in preventing the spread of infection. State and local departments of public health should be consulted concerning regulations for dishwashing in public food establishments, and the methods used in the school-lunch program should conform to those requirements.

When it is necessary to wash dishes during or between serving periods the same procedure should be followed as is used for dishwashing after the whole lunch is served. Hot soapy water is essential to proper dishwashing. Scouring powder and steel wool are needed for cleaning cooking utensils. If the water is hard a softener should be provided.

Whenever it is possible the pans and dishes used in getting a meal ready should be washed

and put away before the lunch is served. If not washed, they should be soaked and stacked ready for washing. Pans and dishes in which eggs, meat, milk, cheese, or starchy foods are cooked should be soaked in cold water. Dishes and pans which have had sugar or sirup in them should be soaked in hot water. Greasy dishes should be wiped out with soft paper. As table dishes are brought from the lunchroom they should be scraped thoroughly with soft paper, rinsed with water, and stacked according to size and shape.

For sterilizing dishes the use of a chlorine compound is recommended. Chlorinated lime made into a concentrated solution by the following formula is inexpensive and convenient to use:

Dissolve 12 ounces of chlorinated lime and 1½ pounds of washing soda in enough cold water to make a gallon. (A glass or earthenware container should be used.) Let stand until clear; a white sediment will settle to the bottom. Pour off the clean liquid into bottles or jugs and cork tightly.

NOTE.—Consult the local health department regarding the proportion of chlorine solution to use for adequate sterilization.

After the dishes are washed they should be rinsed in clear hot water to remove the soap-suds, then placed in the chlorine solution and allowed to stand in it for not less than 3 minutes. The dishes should be completely covered by the solution.

Another method of sterilization is to boil the dishes for 2 minutes after washing and rinsing. This is a less practical method for the average school-lunchroom service because it involves the use of large covered containers fitted with racks to hold the dishes and takes longer to do.

After the dishes are sterilized, either by the chlorine solution or by boiling, they should be placed in draining racks. It is desirable to pour hot water over the dishes but this is not absolutely necessary. If space and time permit, the dishes should be allowed to drain until dry; otherwise, they should be wiped with clean towels and put away immediately.

When dishes are out of the cupboard they should be covered with clean, fresh dish towels to keep off dust and flies.

Sanitation and Safety

Housekeeping

Good housekeeping on the school-lunch project is a very important part of every worker's job. It makes the kitchen and lunchroom safer, more sanitary places in which to work. Food spoils more quickly in a dirty kitchen. It is easier to work in a clean kitchen or lunchroom. Workers enjoy their jobs more when they are working in clean, orderly surroundings.

Usually in schools the cleaning of floors, woodwork, walls, and windows is done by the school janitor. This does not mean, however, that other workers do not have a part in the cleaning. There is some cleaning in every kitchen or lunchroom which must be done every day by school-lunch workers. The lunchroom manager will tell each worker which part of the cleaning she is expected to do. State safety rules will be followed, as well as the directions given below which will help the workers with their cleaning jobs:

Daily jobs

- Ventilating cooking, storage, and serving rooms.
- Dusting furniture and cleaning all working and service space.
- Getting kitchen ready for preparing and lunchroom ready for serving lunch.
- Clearing tables and putting lunchroom in order for serving lunch.
- Cleaning stoves, sink, and refrigerator.
- Washing dishcloths, towels, and dust cloths; also napkins and place mats, if used.
- Sweeping floors, and mopping if necessary.
- Removing garbage and waste and sterilizing the garbage cans.
- Final checking of lunchrooms, storeroom, and serving room to see that everything is clean and in order.

Weekly jobs

- Thorough cleaning of shelves, drawers, cabinets, refrigerator, and stoves.
- Washing window sills and removing finger marks from doors and other woodwork.
- Cleaning storeroom.
- Polishing silver.
- Cleaning sink and drainpipe.
- Special scouring of pots and pans.

Occasional jobs

- Washing windows and cleaning screens and shades.
- Special cleaning of floors.
- Special cleaning and waxing of furniture in lunchroom.
- Special cleaning of mechanical equipment.

Cleaning Kitchen Equipment

There are many good ways of keeping equipment clean, and methods used by homemakers will vary. The following suggestions will be helpful to workers in school-lunch programs.

Cabinets, Cupboards, and Drawers

The kitchen cabinet and built-in shelves should be kept clean and orderly at all times. Usually it is necessary to clean shelves and drawers thoroughly once a week by washing with hot, soapy water, and then rinsing with clear water. If the doors and drawers are left open to dry the cabinet will be aired at the same time. Some workers like to keep paper in the drawers and on the shelves.

Metal containers for supplies such as flour, sugar, and cereals may be wiped with a damp cloth daily to remove finger marks. When empty, containers should be washed, scalded, and dried thoroughly before being refilled.

Stoves

It is easy to keep stoves clean if some cleaning is done daily. Different types of stoves require different methods of cleaning, but there are some general features that are common to all of them. Hot, soapy water is necessary for removing grease from stoves. Grease will accumulate when much cooking is done. Scouring is necessary when food has spilled and hardened on the top of the stove or in the oven. It is important to dry parts of the stove after washing to prevent rust.

Gas stoves.—In cleaning gas stoves it is important to remove burners and scrub them in hot, soapy water as frequently as they collect dirt and grease. At other times they can be wiped off with a damp cloth. The drip trays under the burners should be washed daily to remove any food which has spilled.

Electric stoves need special care in cleaning. The manufacturer's directions for cleaning can be secured from the dealer who supplied the school with the stove.

Kerosene stoves must be handled somewhat differently from any other type of stove. The burners may be removed from the stove and washed in hot, soapy water, but water should never be used on the wicks. Wicks may be cleaned by rubbing with a dry cloth.

Refrigerators and Ice Boxes

A clean refrigerator helps to keep food from spoiling. Vegetables and fruits, except berries and grapes, should be washed before being placed in the refrigerator. All dishes and containers should be kept clean and covered. Any food which is spilled in the refrigerator should be wiped up at once.

At least once a week the refrigerator should be washed with warm water, to which a little baking soda has been added. Racks should be removed and washed and dried. Mechanical refrigerators usually need defrosting weekly.

Ice boxes should be cleaned in the same way as mechanical refrigerators but, in addition, the section which contains the ice and the drain pipe should be thoroughly cleaned.

Sinks

To keep sinks in good condition it is necessary to scrub them daily with hot, soapy water and to use fine cleaning powders to remove stains and marks made by pots and pans.

Most metal fixtures on sinks may be kept clean by being washed with soapy water and polishing with a dry cloth. Some types may need a special polish.

Grease should never be poured into the sink. In order to prevent the drain in the sink from clogging, it is well to pour a solution of sal soda and boiling water into it once a week.

Tables

Work tables, as well as serving tables, should be kept spotless at all times. They may be wiped off with a damp cloth from time to time, while they are in use during the day, but will need to be scrubbed at the end of the day. Warm, soapy water may be used to clean tables with unfinished, painted, oilcloth, or linoleum tops. Porcelain table tops need to be scoured with a fine cleaning powder, as well.

Varnished table tops should be cleaned in the same way as any other varnished furniture. A mixture made of 1 quart of boiling water, 3 tablespoonfuls of linseed oil, and 1 tablespoonful of turpentine is very satisfactory for cleaning varnished surfaces. After the table has been cleaned with this mixture, it should be wiped dry.

Garbage Containers

It is wise to wash and scald garbage containers at the end of each day. Whenever possible they should be allowed to remain open in the sun to be aired.

Cleaning Kitchen and Lunchroom

Floors

Floors should always be kept clean. Dirty, slippery floors are dangerous to walk on. Floors should never be swept while food is being prepared or children are being served. A simple way to prevent the raising of dust while sweeping is to use pieces of dampened newspaper. Dip narrow strips or small pieces of paper in water, then squeeze as much water out of the paper as possible, sprinkle bits of the dampened paper over the floor and sweep.

If floors in the lunchroom need special care, the school administrator or the lunchroom manager will be able to give the necessary directions. For the most part, warm, soapy water applied with a scrub brush or mop is satisfactory. When cleaning linoleum it is important to keep the water from getting underneath the linoleum in order to prevent bulging. Waxed or varnished floors may be cleaned with the same mixture described for the use of varnished tables.

Walls

Walls or doors may need to be cleaned frequently. Painted walls may be washed off with a mild soap or washing soda solution. They should be rinsed with clear water and dried with a clean cloth. The school administrator or the lunchroom manager will be able to give directions for other types of walls which need special care.

Woodwork

Painted and unfinished woodwork may be cleaned with warm, soapy water. Varnished woodwork may be cleaned with the mixture described previously for varnished table tops.

Windows

The dust on windows can be removed easily by rubbing with newspaper or tissue paper. When it is necessary to wash the windows, clear water, to which a few drops of kerosene or ammonia have been added, may be used.

Window and Door Screens

Screens may be kept clean by brushing and wiping with a damp cloth.

Safety Precautions

Every school-lunch worker should do all she can to make the kitchen, lunchroom, and store-room safe places in which to work. The following precautions should be observed:

Broken Glass

Food in a glass jar or dish that has been broken should be thrown away.

Burns

Hot-water faucets should be turned on cautiously. Buckets or tubs of hot water should not be left where children or others may fall into them.

Handles of pans on the stove should be turned so that there is no danger of the pans being knocked over. Pans with loose handles or rounded bottoms should not be used because food may be spilled and burn the worker.

Lids from steaming kettles should be removed by raising the farther edge of the cover first. Doing this keeps the steam from coming up in the face of the worker.

Before removing a hot cooking pan from the stove, a place should be prepared to put it down and the flame should be turned off. The pan should be held firmly with pot holders, not with the uniform, apron, dish-cloth, or towel.

Pot-holders should be kept dry. Handling a hot dish or pan with a wet holder causes steam to rise which may cause burns.

Before pouring boiling liquid into a glass jar put a metal spoon or knife in it and place it in the sink or dishpan. The boiling liquid may cause the jar to break and scald the worker.

Pressure cookers are safe if directions are carefully followed.

Sal soda and lye should be used cautiously. In some States safety regulations do not permit the use of these materials.

Cuts

Sharp knives should be kept in knife holders. They should not be stored loose in a drawer. Knives with loose handles should not be used since there is danger of the blade slipping.

A regular can opener should be used to open tin cans, and the can should be held in the proper position while being opened. Empty cans should be rinsed and stored at once. Opened tin cans and sharp-edged pans should be handled with care.

Broken glass or broken dishes should be placed in a separate container, not in the wastebasket.

Electricity

Metal sockets and electrical equipment should never be touched while the hands are wet or while the worker is standing on a wet floor.

An electric cord that is worn through to the wire should not be used.

Enamelware

Enamel pans that have been chipped are dangerous to use.

Falls

Falling is a common form of accident. Workers should wear well-fitting shoes, with low heels, and keep the shoestrings tied. High heels cause the ankles to turn more easily. Run-over heels may cause accidents.

In icy weather entrances and doorways should have ashes or sand sprinkled on them to prevent falls. Loose boards of floors or steps should be nailed securely.

Any water, grease, vegetable parings, or bits of food dropped on the floor should be cleaned up immediately. They may cause workers to slip and fall.

Boxes, mops, brooms, and other articles should not be left for a moment where workers might stumble over them. Workers should not stand on chairs or on open drawers. Strong kitchen stepladders should be used. Stair rails should be used to avoid slipping and falling. Stairs and passageways should be well lighted and kept clear to prevent stumbling and falling.

Shelves and cabinets should not be overloaded.

Dishes, cans, containers, and other articles on shelves should be firmly placed so they will not fall if jarred.

Fires and Explosions

Ashes from coal or wood stoves should be placed in metal containers.

Curtains or other flimsy materials should not be hung near a stove because they might blow into the flame. Towel racks and clotheslines should not be placed near the flame.

Papers should not be tacked to the wall behind or near a stove.

Kerosene or gasoline should be used cautiously, if at all, and should be stored away from the kitchen in safety cans. Neither should be used to start a wood or coal fire.

Oily rags should be kept in tightly covered metal containers, if it is necessary to have them.

Fat catches fire easily. It should be closely watched in broilers or in pans on top of the stove. If fat catches fire, spread baking soda or salt over the flame. Water should not be used.

Paraffin catches fire easily and will explode if it becomes too hot.

To prevent explosions, doors of gas ovens should be opened when the oven burners are being lighted. The match should be lighted before the gas is turned on. Never look for gas leaks with a lighted match or candle, and never light a match in a room where there is a strong odor of gas.

Unused matches should be kept in tightly covered metal containers.

Used matches should be dropped into a tin or glass container.

Gas-stove jets and electric-stove switches should be completely turned off when not in use.

Pins

Pins should not be used to fasten clothing. They may fall into the food and be swallowed by the children.

Splinters

All rough edges of wood should be smoothed by being rubbed with sandpaper, because splinter wounds frequently become infected.

Strain

Heavy equipment, boxes, or bags should not be moved or lifted without help, and lifting should be done by bending the legs instead of the back.

Financing the School Lunch

The volunteer in all probability will have no responsibility concerning the financial problems of the school lunch. The school lunch, being an essential part of the school, is necessarily supported by the board of education. Usually space and equipment are provided as well as water, heat, light, power, and janitor service.

There are various methods of organizing the school lunch. Whatever the method used, every effort should be made to insure an adequate lunch for every child. It is important to remember that whatever means of payment is used there should be no discrimination between the child who pays and the child who cannot pay.

Utilizing Available Resources

Many schools find it possible to serve adequate lunches through the complete utilization of local community groups. Others need to take advantage of assistance available through State and Federal agencies. An example of Federal assistance is the program of the Food Distribution Administration under which sponsors may be reimbursed for a part of the cost of food in cases where the school is unable to serve an adequate lunch to all children.

In large schools where the number served ranges from 300 to 1,000 or more the school lunch may be self-supporting. Units of this size need the supervision of a trained dietitian or lunchroom manager. The salary of this worker

should not be paid out of income from the lunchroom but from the same fund which pays teachers' salaries. If there are profits arising from the school lunch, they should be returned directly to the school lunch. The income may be used to reduce the cost of food to the children.

Contributions From Individual Homes

In some areas contributions from individual homes have made it possible to operate a school-lunch program in a small or moderate-sized school. Such contributions are sometimes food and sometimes money.

If food contributions are received, it is well to make a working plan in advance. Letters may be sent from the school to the parents explaining the lunch program and listing the foods needed. The family in reply will inform the school of the foodstuff it is able to contribute.

Having the food come in at specified times will help in meal planning. If there is no storage place at school the food will have to be brought in from day to day or arrangements made for storage space. In any case, a plan should be worked out so that the person in charge of the lunch program and the contributors know just what supplies are to be on hand on a given day or in a given week.

Satisfactory food contributions include fruit, vegetables, and eggs. If fresh fruits and vegetables are not to be had, canned, dried, or frozen foods are excellent substitutes. Foods canned under supervision at community centers by approved methods are safe to use. Meats and nonacid vegetables should be processed in a pressure canner. If perishable foods, as milk, are accepted, the volunteer should make certain it is safe for using according to standards set by the health department. For instance, milk should be pasteurized or used in evaporated or dried forms. Raw milk, if used, should be boiled or used only in cooked products.

Whether the contribution be food or money, it will go into a common pool to be used for all. No child should feel that he has not contributed his part. The school administrator will know the community well and will be able to act wisely and with understanding in working out a plan for accepting contributions of money or food.

Keeping Records

Adequate records are valuable for the smooth operation of a school-lunch program, no matter what the size of the school may be. The type, kind, and number of records to be kept will depend on the size of the school and the number and kinds of workers. It is suggested that each school develop its own system of record keeping. Any system used should be *simple* so as to save time, yet complete enough to give *accurate* information. Records are of little value unless they are kept *up to date*.

Suggested equipment for record keeping:

File cabinet—for filing all records on cards. Cards 4 by 6 or 5 by 8 inches are suggested. A set of indexes is timesaving.

Notebooks—two inexpensive, spiral-bound notebooks of ruled paper which may be ruled vertically for columns as needed. One will be used for the order book and the other for the combined time and pay roll book.

Every school will want a record of the number of children served. Other types of records³ which volunteers may be called upon to assist in keeping are those pertaining to the foods used, the finances involved, and the services performed by the workers.

Food Records

After the *weekly menu plans* have served their immediate purposes they are still valuable as reference material. By comparing the used menus with new ones being prepared, unnecessary repetition of foods may be avoided and different food combinations may be suggested.

It is good practice to keep *order lists* which show the kinds and quantities of foods ordered, and when and from whom they were purchased. The order lists can be kept in a notebook or filed as order sheets. To eliminate any errors, the foods which are delivered should be checked both with the *delivery slip* and the order list. The delivery slip should then be signed by the person receiving the supplies, filed according to date, and kept until after the bills have been paid.

An up-to-date *inventory of food supplies* should be available to the workers responsible for planning menus and buying food. This inventory should indicate the amount of food stocks on hand and its cost. The date on which supplies are used should be recorded.

Finance Records

The finance records should *show where and how money is spent*, and *the amount and nature of income, whether it be food or money*. Records should be kept of all money received and of all bills paid. They are a valuable source of reference material to be used in planning the school-lunch budget.

A daily summary form—for total receipts in food and money as well as total expenses for food, laundry, equipment, and labor—should be kept. This record should be summarized on a weekly or monthly basis for the school administrator and the school-lunch committee to use in formulating school-lunch policies.

Service Records

The person designated by the school administrator to be in charge of the school lunch may develop with the workers a schedule or plan for daily work. (See p. 13.) The responsibility of each worker should be designated. When volunteers are helping in the lunchroom, a *service record* is valuable both for the volunteer and the school. The record should show the days as well as the time of day volunteers have worked. Knowing how to reach the worker at home is usually helpful information to have on the service records.

SPACE AND EQUIPMENT

The space available for the preparation and serving of foods varies widely from school to school. Many schools have ample, well-arranged space and equipment that is adequate for the school lunch. In other schools many kinds of arrangements have been made to provide kitchen space and to equip the kitchen. Special rooms are usually set aside for the eating of the school lunch. In some schools it may be the classroom; in others, the library, or the gymnasium. In any case, it is necessary to

³ OHIO DIETETICS ASSOCIATION. MANUAL FOR MANAGERS OF RURAL AND OTHER SMALL SCHOOL LUNCHROOMS. Chapter IX, Food Cost Accounting, pp. 54 to 63. 1942.

plan for space that is not scheduled for any other school activity during the hours it is to be used for the lunch.

In some instances the school administrator may ask the volunteer to help plan and group the equipment. Among the suggestions that follow, the volunteer may find some that will help her if she is asked to give this kind of service.

The type of large equipment needed for the preparation and serving of food depends on the size of the lunch program. Kitchens of large school-lunch projects usually have—

- A stove with built-in oven.
- Hot and cold water.
- Refrigeration.
- Storage cabinet (or room) for food.
- Storage cabinet (or room) for utensils.
- Work tables.
- Serving counters.

Even the smallest rural school-lunch program needs a stove, storage space, and tables or shelves for working and serving. A sink is also highly desirable in the kitchen of the rural school. Where there is no running water, drainage from the sink should be taken care of according to methods approved by the health department. Sometimes the simple addition of a rack for utensils near the stove will make a great improvement. Kitchen stools or high chairs with back rests, and linoleum rugs or wooden racks placed over cement floors help to prevent fatigue.

The durability of the material, the size of equipment that is best suited for preparing the amounts of food needed, the size and shape of pan that will best fit the heating unit or the oven should be given attention when selecting utensils.

The following list may help those who are charged with the job of buying or assembling small equipment. It may be helpful to persons who wish to plan together to make a contribution of equipment to the school-lunch program.

SMALL EQUIPMENT FOR SERVING 50 TO 100 CHILDREN

- 2 kettles (20 quart) of steel or heavy aluminum, if possible; if of enamelware, they should be heavy. Straight sides and side handles are preferable.
- 3 kettles (16 quart).
- 1 kettle (10 quart).

Lids to fit all kettles.

- 1 (15 quart) double boiler.
- 3 drip pans (suitable for size of oven) 3 inches deep.
- 3 shallow baking sheets (suitable size for oven).
- 3 enamelware (3 quart) pitchers (may be of aluminum).
- 1 food grinder.
- 2 large trays.
- 3 or 4 large mixing bowls of assorted sizes.
- 3 large dishpans.
- 1 or 2 dish drains.
- 1 garbage can (galvanized, watertight, with cover, adequate for 1 day's waste).
- 1 large colander.
- 1 large coarse strainer.
- 1 large frying pan.
- 1 cutting board (size board 18 by 18 by 2 inches).
- 1 clock.
- 1 can opener (institutional size).
- 1 can opener (hand-operated).
- 1 rotary egg beater.
- 2 soup ladles with side lips.
- 3 large wooden stirring spoons (long enough to use in the 20-quart kettles).
- 2 standard measuring cups (1-cup size).
- 2 standard quart measures (straight sides).
- 1 fruit-juice extractor or reamer.
- 1 large kitchen fork.
- 1 small kitchen fork.
- 2 or 3 paring knives.
- 1 butter knife.
- 2 sets of measuring spoons.
- 1 pair shears.
- 2 vegetable brushes.
- 1 large grater and shredder.
- 1 knife sharpener.
- 1 large potato masher.
- 1 spatula or cake turner.
- 1 apple corer.
- 1 flour sifter.
- 4 holders.
- 1 stepladder stool.
- 2 asbestos mats.
- 6 cleaning cloths.
- 6 dishcloths.
- 12 dish towels.
- 1 broom.
- 1 dustpan.
- 1 mop with pail.
- 1 towel rack (or clothesline).

It is desirable to have the following for serving each child:

- Plate.
- Bowl.
- Cup or glass.
- Dessert dish.
- Fork.
- Teaspoon.

MARKETING GUIDE

The following guide has been used by workers in school-lunch programs. The servings are based on amounts eaten by children in elementary grades and may need to be adjusted for adolescents. In using this guide it is well

to remember that products vary in size and shape and therefore the number of average servings given in the guide will vary. This needs to be taken into consideration in preparing food.

(Based on $\frac{1}{2}$ cup for average serving)

<i>Food</i>	<i>Weights and measures</i>	<i>Amount for 50 servings</i>
Apples	1 pound=3 medium-sized, or 3 cups, diced raw or $1\frac{1}{2}$ cups, applesauce	9 pounds. 18 pounds or $1\frac{1}{2}$ pecks.
Apricots	1 pound=3 cups, dried, or $4\frac{1}{2}$ cups, soaked and cooked	5 pounds, dried.
Bacon	1 pound=20 strips	$2\frac{1}{2}$ pounds.
Bananas	1 pound=3 large, or 2 cups, sliced.	
Beans:		
Fresh, string	1 pound=3 cups, cooked	9 pounds.
Dried, navy	1 pound= $2\frac{1}{4}$ cups, 6 cups cooked	8 pounds.
Dried, lima	1 pound= $2\frac{1}{4}$ cups, 6 cups cooked	8 pounds.
Dried, kidney	1 pound= $2\frac{2}{3}$ cups, 7 cups cooked	7 pounds.
Beef:		
Chipped	allow 1 ounce per serving	$2\frac{1}{2}$ -3 pounds.
Fresh	allow $\frac{1}{8}$ pound per serving	6 pounds.
Beets	1 pound=winter beets, 4 medium-sized, or 2 cups, cooked and sliced.	12 pounds (tops removed).
Bread:		
Loaf	1 pound=18 slices.	
Soft crumbs	1 pound=9 cups.	
Dry, fine	1 pound= $3\frac{1}{2}$ cups.	
Butter	1 pound=2 cups, will spread 100 slices of bread.	
Cabbage	1 pound=5 cups, raw, shredded or $2\frac{1}{2}$ cups, cut and cooked	6 pounds. 12 $\frac{1}{2}$ pounds.
Carrots	1 pound=3 to 5 carrots, or 3 cups, raw, diced or 2 cups, cooked or 20 raw sticks	8 pounds. 12 $\frac{1}{2}$ pounds (tops removed). 3 pounds.
Celery	1 pound=small bunch, or 3 cups, cut in $\frac{1}{2}$ -inch, raw. or $1\frac{1}{2}$ cups, cooked.	
Cheese:		
Cottage	1 pound= $2\frac{1}{4}$ cups	8 $\frac{1}{2}$ pounds.
"Store"	1 pound=4 cups, grated	
Chicken, dressed	5 pounds=1 quart, cooked, diced.	
Cocoa	1 pound= $4\frac{1}{2}$ cups	2 cups.
Corn, canned	See table of can sizes.	
Corn meal	1 pound=3 cups, or $3\frac{1}{2}$ quarts, cooked.	
Cranberries	1 pound=1 quart.	
Flour:		
White	1 pound=4 cups.	
Whole-wheat	1 pound=4 cups.	
Graham	1 pound= $3\frac{2}{3}$ cups.	
Ham	Allow $\frac{1}{8}$ lb. per serving	2 6-pound hams.

<i>Food</i>	<i>Weights and measures</i>	<i>Amount for 50 servings</i>
Lamb.....	Allow $\frac{1}{8}$ lb. per serving.	
Lard.....	1 pound=2 cups.	
Lemon.....	1 small=2 to 3 tablespoons juice. 6 = 1 cup juice.	
Lettuce, average head.....	10 to 15 salad garnishes.....	4 heads.
Macaroni.....	1 pound=5 cups uncooked, $1\frac{1}{2}$ -inch lengths; 3 quarts, cooked...	3 pounds.
Molasses.....	1 pound=1 $\frac{1}{3}$ cups.	
Mayonnaise.....	1 pound=2 cups.	
Meat, chopped, cooked.....	1 pound=2 cups.	
Nut meats, chopped.....	1 pound=4 cups.	
Oats, rolled.....	1 pound=5 $\frac{1}{2}$ cups, uncooked. or 2 $\frac{1}{3}$ quarts, cooked.	
Oil, salad or cooking.....	1 pound=2 $\frac{1}{4}$ cups.	
Onions.....	1 pound=4 to 5 medium. or 2 cups, chopped raw.	
Oranges, medium.....	3=1 cup juice. 12=3 $\frac{1}{2}$ cups pulp.	
Peaches:		
Dried.....	1 pound=2 cups, dried..... or 4 cups, soaked and cooked,	6 pounds.
Fresh.....	1 pound=3 to 5 peaches.	
Peanut butter.....	1 pound=1 $\frac{3}{4}$ cups.	
Peas:		
Fresh.....	1 pound=1 cup, cooked.....	25 pounds.
Dried.....	1 pound=2 $\frac{1}{3}$ cups, or 5 $\frac{1}{2}$ cups, soaked and cooked.	
Canned.....	See table of can sizes.	
Pineapple.....	1 pound=2 cups tidbits; 8 to 12 slices.	
Potatoes:		
White.....	1 pound=4 medium. or 2 $\frac{1}{2}$ cups, diced, raw or cooked..... or 2 cups mashed.....	13 pounds. 16 pounds.
Sweet.....	1 pound=2 to 3 medium.	
Prunes.....	1 pound=2 $\frac{1}{2}$ cups, dried, or 4 cups, soaked and cooked..... or 2 cups, cooked and pitted.	6 pounds.
Raisins, seedless.....	1 pound=3 cups.	
Rice.....	1 pound=2 cups, uncooked, or 6 cups, cooked.	
Salt.....	1 pound=2 cups, 1 ounce=2 tablespoonfuls.	
Salmon.....	1 pound=2 cups.	
Soda.....	1 pound=2 $\frac{1}{2}$ cups, 1 ounce=2 $\frac{2}{3}$ tablespoonfuls.	
Spaghetti.....	1 pound=5 cups, uncooked, or 2 $\frac{1}{4}$ quarts, cooked.	
Spinach.....	1 pound=2 cups, fresh, cooked.....	16 pounds. (good condition)
Sugar:		
Granulated.....	1 pound=2 $\frac{1}{4}$ cups.	
Confectioners'.....	1 pound=3 $\frac{1}{2}$ cups.	
Powdered.....	1 pound=2 $\frac{1}{4}$ cups.	
Brown.....	1 pound=2 cups, firmly packed.	
Tomatoes.....	1 pound=4 fresh, medium-sized, or 2 cups, cooked, fresh or canned.	
Turnips.....	1 pound=2 medium, or 3 cups diced, raw.	
Wheat cereal:		
Rolled.....	1 pound=4 $\frac{1}{2}$ cups.	
Ground.....	1 pound=2 $\frac{1}{8}$ cups.	

SOURCES OF ADDITIONAL INFORMATION

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